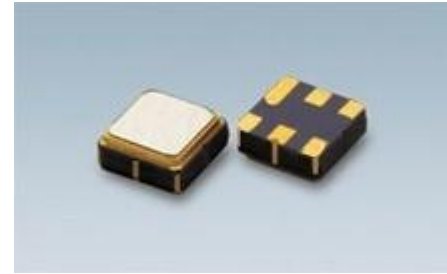


SAW FILTER

Part Number: VTF20171

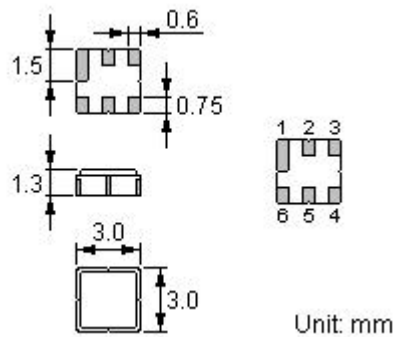
Features

- Low-loss RF filter for TDSCDMA mobile systems
- Low amplitude ripple
- No matching network required for operation at 50Ω
- Ceramic package for **Surface Mounted Technology (SMT)**
- Lead-free production and **RoHS** compliant



Package Dimensions

Ceramic Package: **DCC6C**



Pin Configuration

2	Input
5	Output
1, 3, 4, 6	Ground

Marking



Top View, Laser Marking

" . ": Terminal 1

" * ": Lot number (The code shown below varies in a 4-year cycle)

Code	1	2	3	4	5	6	7	8	9	10	11	12
2009	A	B	C	D	E	F	G	H	J	K	L	M
2010	N	P	Q	R	S	T	U	V	W	X	Y	Z
2011	a	b	c	d	e	f	g	h	i	j	k	m
2012	n	p	q	r	s	t	u	v	w	x	y	z

Maximum Ratings

Rating		Value	Unit
Input Power Level	P	10	dBm
DC Voltage	V_{DC}	12	V
Operating Temperature Range	T_A	-40 ~ +85	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C
ESD Voltage (HB)	V_{ESD}	150	V

Electrical Characteristics

Item		Minimum	Typical	Maximum	Unit
Center Frequency	f_c		2017.50		MHz
Insertion Loss	IL				
2010.00 2025.00 MHz		--	3.4 *(4.2*)	dB
Absolute Attenuation	α				
1700.00 1785.00 MHz		40	48		dB
1800.00 1860.00 MHz		45	48		dB
1920.00 1980.00 MHz		30	40		dB
2045.00 2070.00 MHz		6 *)	20 *(dB
2070.00 2085.00 MHz		15	30		dB
2170.00 4000.00 MHz		30	45		dB
Amplitude Ripple (p-p) 2010.00 2025.00 MHz	$\Delta\alpha$		0.5 *(1.2 *)	dB
Group delay ripple 2010.00 2025.00 MHz			10	30	ns
Input VSWR					
2010.002025.00 MHz		--	1.5: 1	1.8: 1 *)	
Output VSWR					
2010.00 2025.00 MHz		--	1.5: 1	1.8: 1 *)	
Input / Output Impedance (Nominal)		50			Ω

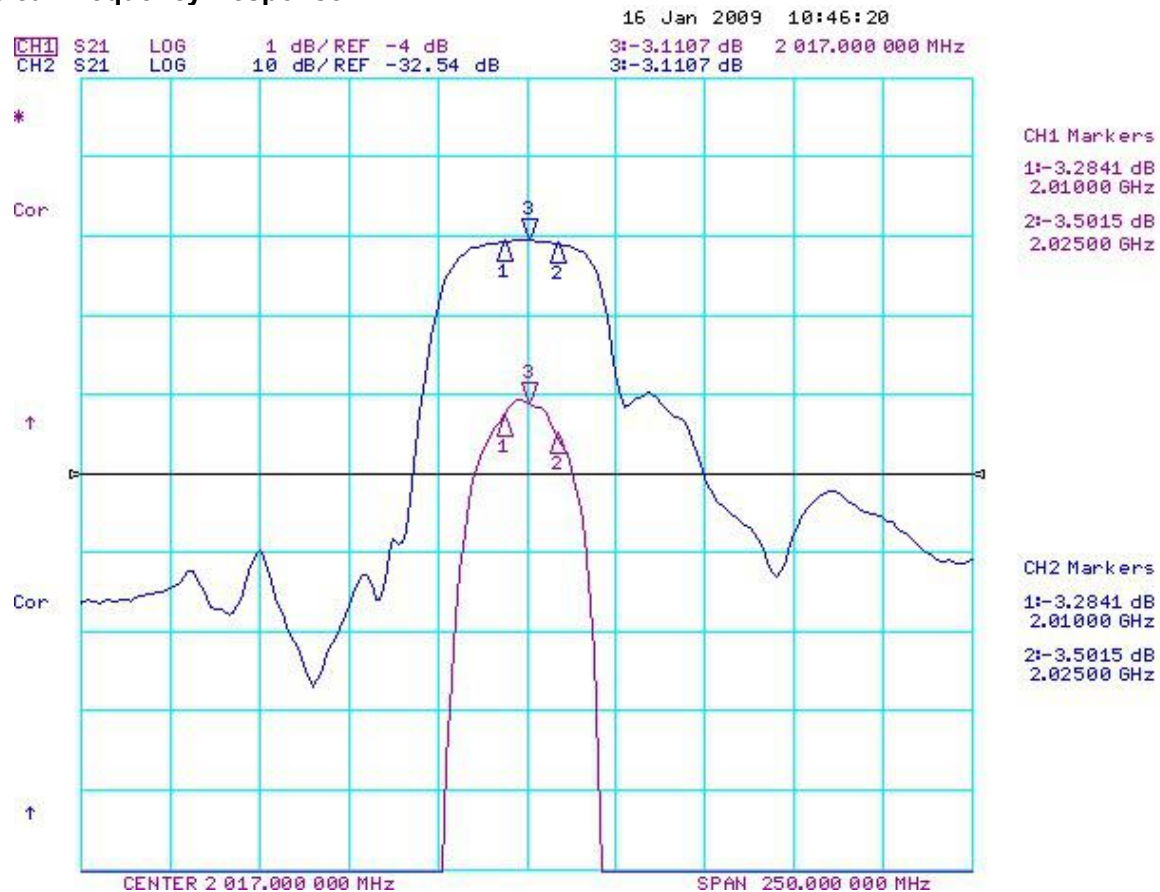
*(: Normal temperature 25°C

*) : -40°C ~ +85°C

 RoHS Compliant

 Electrostatic Sensitive Device

Typical Frequency Response



Stability Characteristics

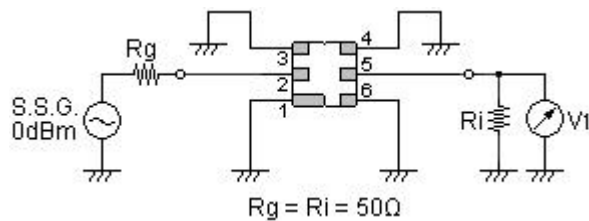
	Test item	Condition of test
1	Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0 m
2	Vibration resistance	(a) Frequency of vibration: 10~55Hz (c) Directions: X,Y and Z (b) Amplitude: 1.5 mm (d) Duration: 2 hours
3	Moisture resistance	(a) Condition: 40°C, 90~95% R.H. (c) Wait 4 hours before measurement (b) Duration: 96 hours
4	Climatic sequence	(a) +70°C for 16 hours (c) -25°C for 2 hours (e) Wait 4 hours before measurement (b) +55°C for 24 hours, 90~95% R.H. (d) +40°C for 24 hours, 90~95% R.H.
5	High temperature exposure	(a) Temperature: 70°C (c) Wait 4 hours before measurement (b) Duration: 250 hours
6	Thermal impact	(a) +70°C for 30 minutes \Rightarrow -25°C for 30 minutes repeated 3 times (b) Wait 4 hours before measurement

Requirements: The SAW filter shall remain within the electrical specifications after tests.

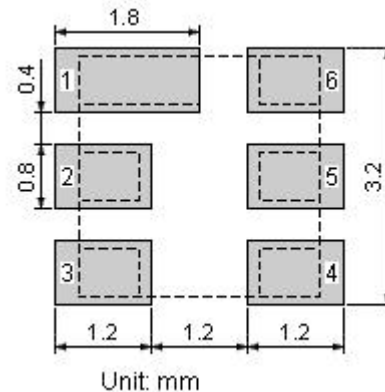
Remarks

- SAW devices should not be used in any type of fluid such as water, oil, organic solvent, etc.
- Be certain not to apply voltage exceeding the rated voltage of components.
- Do not operate outside the recommended operating temperature range of components.
- Sudden change of temperature shall be avoided, deterioration of the characteristics can occur.
- Be careful of soldering temperature and duration of components when soldering.
- Do not place soldering iron on the body of components.
- Be careful not to subject the terminals or leads of components to excessive force.
- SAW devices are electrostatic sensitive. Please avoid static voltage during operation and storage.
- Ultrasonic cleaning shall be avoided. Ultrasonic vibration may cause destruction of components.

Test Circuit

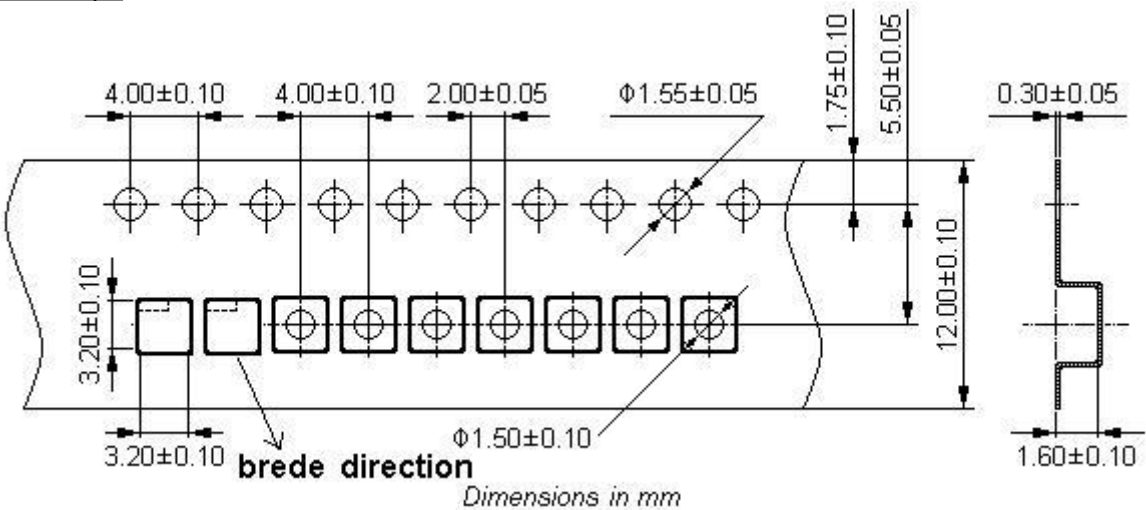


Recommended Land Pattern

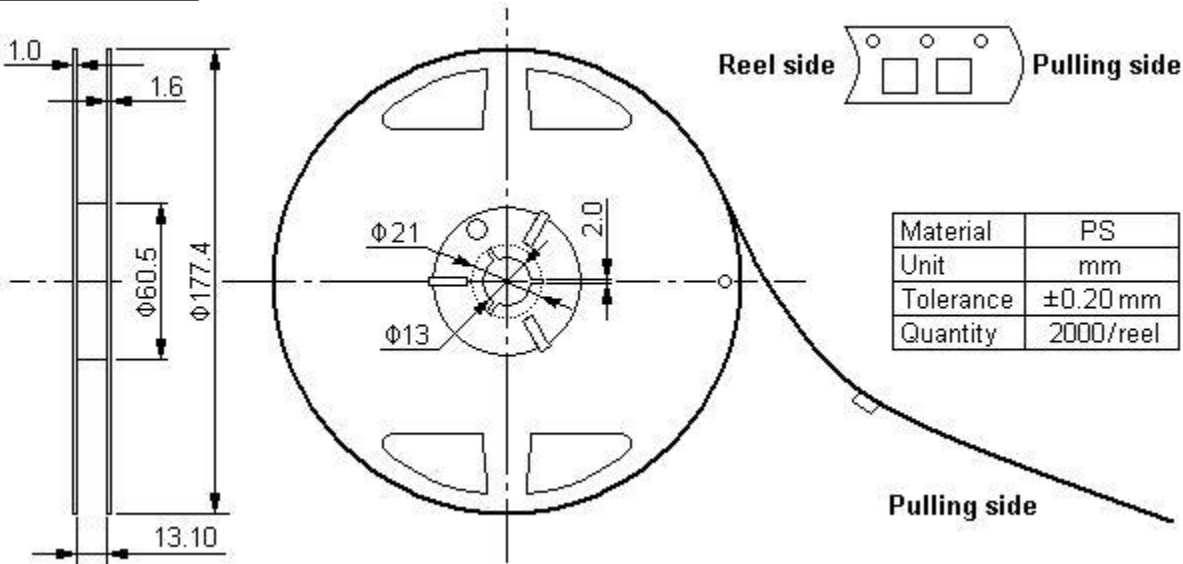


Packing Information

Carrier Tape



Reel Dimensions



Material	PS
Unit	mm
Tolerance	±0.20 mm
Quantity	2000/reel

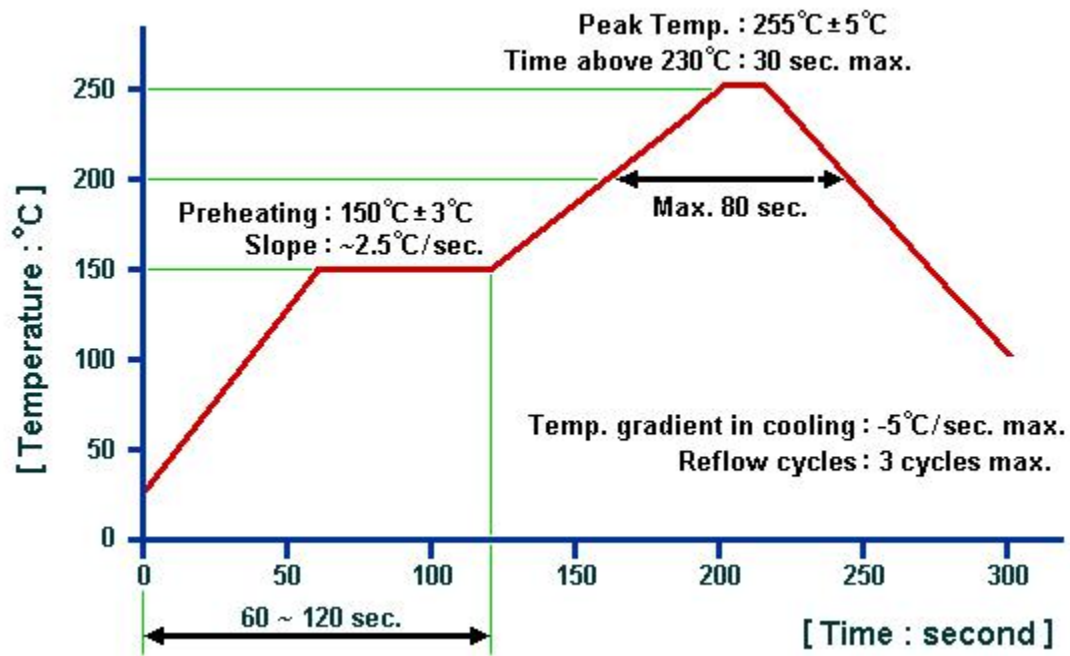
Outer Packing

Type	Quantity	Dimension	Description	Weight
Carton Box I	10000	190×190×95	anti-static plastic bag & carton box 1 reel / bag	0.85
Carton Box II	20000	190×190×190	5 bags / box (10000 pcs) 10 bags / box (20000 pcs)	1.80

Unit: mm

Unit: kg

Recommended Soldering Profile



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1. The specifications of this device are subject to change or obsolescence without notice.
2. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
3. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
4. For questions on technology, prices and delivery, please contact our sales offices or e-mail info@v-torch.com.